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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/634,024

08/04/2003

Winthrop D. Childers

10971935-17

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7590

09/01/2006

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Intellectual Property Administration

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EXAMINER

VO, ANH T N

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 09/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/634,024	<b>Applicant(s)</b> CHILDERS ET AL.	
	<b>Examiner</b> Anh T.N. Vo	<b>Art Unit</b> 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 6/26/2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 39-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 39-41 and 43-51 is/are rejected.
- 7) ☒ Claim(s) 42 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***FINAL REJECTION***

The rejection over Bullock et al (US 5,812,156) and Fujii (US 5,980,030) is withdrawn in view of the amendment to the claims.

***Claims Rejection***

***Claim Rejections -35 USC 112***

Claims 39-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction clarification is required.

In claim 39, it is not understood how the replacement ink information can be “associated” with the replaceable ink container without an attached memory device, how the signal source can exchange the information since it is not connected to the container and how the recitation “controller” and “replaceable ink container” is read on the preferred embodiment or seen on the drawings. The same is true for reciting “replaceable ink reservoir” in claim 41.

In claim 40, the recitation “a replacement ink” on line 2 and “replacement ink information” on line 3 is confusing because it is unclear if these are additional “ink” and “information” or further recitation “replacement ink” and “replacement ink information” on line 3 of claim 1. The same is true for reciting “replacement ink supply information” on line 2 of claim 44, “memory device” in claim 45.

In claim 42, it is unclear where the “replaceable ink reservoir” on line 3 comes from, how the reservoir can be “coupled” to the system and how the signal source can recognize this reservoir.

In claim 43, it is not unclear where the “replacement ink supply” on line 7 comes from, how the source can exchange the information with the sink supply without being connected to it, and how the recitation “controller”, “first ink supply”, “first ink supply information”, “replacement ink supply” and “replacement ink supply information” is read on the preferred embodiment or seen on the drawings.

In claim 45, it is unclear how the replacement ink supply can be “used” on line 4 of claim 45.

The remaining claims are dependents from claim 43 therefore also considered indefinite.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 39-41 and 43-44 and 46-51 are rejected under 35 USC 102(e) as being unpatentable over Gragg et al (US 5,757,390).

As the best construed, Gragg et al discloses in Figure 4 a printing device comprising:

- a controller (106);
- an ink cartridge (20) which is replaceable since it is removable inserted into a carriage (12);
- a replacement ink supply(60) being supplied from a remote ink reservoir (62);
- a signal source or a memory (108) separate from the controller (processor 106) and not coupled to an ink reservoir (20);
- Wherein the memory (108) stores information of the volume of the ink in the cartridge (20) in the form of a look-up table, see lines 1-9, column 9 and it is connected to the processor (106) with inherent cables and connectors;
- an inlet (56) coupled to a head (26), see Figure 7;
- an unmarked outlet coupled to the reservoir (62);
- Wherein the fluid outlet is remotely located from the ink supply inlet 56);

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- Wherein the fluid outlet is fluidically connected to the ink supply inlet (56) via a flexible fluid conduit (38); and
- Wherein the electrical signal source (108) is remotely located from the replacement ink supply.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 39, 41 and 43-46 are rejected under 35 USC 103 (a) as being unpatentable over Hillmann et al (US 5,365,312).

Hillmann et al discloses in Figures 1-2 a printing device comprising:

- a controller (16);
- a signal source or a memory (14) containing the replacement ink information, see lines 39-67, column 4, attached to a replacement ink container (11, 12) having an inlet port (13) coupled to a head (10);
- an inherent flexible bus cable (15) for connecting the signal source (14) to the controller (16);
- and
- Wherein the electrical signal source (14) contains a memory device which has a write portion which is adapted to be updated by the controller to provide an estimate of a volume of the replacement ink supply during usage of the replacement ink supply, see lines 15-32, column 6.

However, Hillmann does not disclose that the signal source (14) is separate from and not coupled to the ink container (11, 12). For example, the signal source (14) of Hillmann et al is externally glued to the housing of the container (11, 12). Since the signal source (14) is a separate assembly from the ink container (11, 12) a skilled artisan realizes that it can be mounted anywhere, i.e., carriage or frame of the printing device without alternating the performance of the printing device. Thus, mounting the signal source of Hillmann et al on the frame of the printer is considered to be a matter of a mechanical design expedient for an engineer. It would have been obvious to a person having skill in the art at the time the invention was made to mount the signal source (14) of Hillmann et on the frame or the carriage for the purpose of reducing size of the ink cartridge.

#### ***Response to Applicant's Arguments***

The applicant's arguments with respect to the prior art rejection have been carefully considered and have been traversed in view of the new grounds of rejection over Gragg et al and Hillmann et al. references.

#### ***Allowable Subject Matter***

Claim 42 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. This claim is allowed because the prior art of record fails to suggest "wherein the electrical sign source is a signal providing circuit that enables the printing system to operate whenever a replaceable ink reservoir is coupled to the printing system" in combination as claimed.


#### ***CONCLUSION***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo whose telephone number is (571) 272-2262. The examiner can normally be reached on Tuesday to Friday from 9:00 A.M. to 7:00 P.M.. The fax number of this Group 2861 is (571) 273-8300.



ANH T. VO  
PRIMARY EXAMINER  
August 30, 2006